nance treatment of schizophrenia. **METHODS:** The schizophrenia Markov model developed by the National Institute for Health and Care Excellence (NICE) was adapted to the context of LAI antipsychotics. Effectiveness was measured through Quality-Adjusted Life Years (QALYs) and number of relapses. The economic analysis was conducted over a ten-year time horizon, including cost of managing stable schizophrenia, relapse and treatment-emergent adverse events (TEAEs). Probabilities of relapse, discontinuation due to adverse events, and due to other reasons came from a mixed treatment comparison of pivotal clinical trials; disutilities associated to TEAEs and other non-drug-specific inputs came from various epidemiological sources. **RESULTS:** AOM was associated with higher number of QALYs (7.26 vs 7.17, 7.18 & 7.19 for PP, RLAI and OP respectively) over a 10-year time horizon. Assuming a theoretical parity price between AOM and PP, the base case analysis showed that AOM was the dominant strategy as compared to RLAI, PP and OP. Deterministic sensitivity analyses confirmed these overall Conclusions, the main drivers of cost-effectiveness being both probability and cost of relapse. In the probabilistic sensitivity analysis, AOM demonstrated a higher probability of being cost-effectiveness than RLAI, PP and OP at a willingness to pay threshold of £20,000 (52%, 89% and 90%, respectively). **CONCLUSIONS:** Although model outcome may vary according to local data and settings, and assuming a theoretical parity price with PP, AOM was found to provide clinical benefits at lower total costs compared to other atypical LAI antipsychotics, showing its value in the maintenance treatment of schizophrenia.

PMH26

PRESCRIBING ANTI-DEPRESSANTS BY BASELINE SEVERITY: EVIDENCE SYNTHESIS, ECONOMIC MODEL AND VALUE OF INFORMATION ANALYSIS

Thom H[1], Welton N[1], Lewis G[2]

[1]*University of Bristol, Bristol, UK,* [2]*University College London, London, UK*

OBJECTIVES: Aim to determine the most cost-effective threshold of depression severity above which to prescribe anti-depressants to patients, in England and Wales, presenting with depression and under consideration for anti-depressants. Also aim to evaluate the cost-effectiveness of a new trial of anti-depressants in a population of wider range of depression severity than in previous trials. **METHODS:** Meta-regression of existing study results to estimate a proportional treatment effect on depression severity, which is then extrapolated to a wider range of severity than in included trials. An economic model which consists of a continuous outcome for the initial 12 weeks of treatment, followed by a Markov model with states for depression category and treatment. Treatment effects on Hamilton Depression Rating Scale (HAMD) were mapped to EQ5D. Expected value of partial perfect information (EVPPI) was used to determine an upper bound on the value of collecting ffurther evidence. **RESULTS:** Patients on anti-depressants had an additional 12% (CrI 3-21%) decrease in 6-week HAMD versus placebo. Treating patients with a severity >2 on HAMD had the highest probability (>65%) of being cost-effective at £20,000 willingness-to-pay threshold. However this assumes that the relationship with severity can be extrapolated beyond the range of HAMD included in the systematic review. A short-term trial investigating the relation between treatment effect and severity and quality of life in depression patients had EVPPI=£67.7 million over a 10 year time-horizon. **CONCLUSIONS:** On the basis of available evidence, our model suggests it may be cost-effective to treat patients with lower severity of symptoms than have been included in the majority of existing RCTs. However, evidence of treatment efficacy in those with low HAMD is lacking, and there is likely to be value in conducting a trial on this lower severity population.

PMH27

ECONOMIC EVALUATION OF NALMEFENE FOR THE TREATMENT OF ALCOHOL DEPENDENCE IN GREECE

Relakis J[1], Paparrigopoulos T[2], Kourlaba G[3], Maniadakis N[1]

[1]*National School of Public Health, Athens, Greece,* [2]*Athens University Medical School, Athens, Greece,* [3]*Collaborative Center for Clinical Epidemiology and Outcomes Research (CLEO), Athens, Greece*

OBJECTIVES: To assess, from the perspective of national health insurance, the cost-effectiveness of psychosocial support plus nalmefene versus psychosocial support alone, for the treatment of adult patients with alcohol dependence who have a high drinking risk level, without physical withdrawal symptoms, and who do not require immediate detoxification. **METHODS:** A cost-effectiveness Markov model, originally developed for the Single Technology Appraisal by the National Institute for Health and Care Excellence of Nalmefene, was adapted to the Greek health care setting to evaluate the health effects and associated costs of compared therapeutic options. The model consisted of a short-term phase (1 year: based on clinical trials assessing nalmefene) and a long-term phase (2-5 years) evaluating patient progression and a second-line abstinence treatment option. Clinical inputs were derived from ESENSE1 (NCT00811720), ESENSE2 (NCT00812461) and SENSE (NCT00811941) clinical trials and epidemiological data from the national statistical authority and published literature. All direct costs with respect to treatment of alcohol dependence and the management of alcohol-attributable harmful events were considered reflecting the year 2014. **RESULTS:** Over a 5-year horizon, the addition of nalmefene to psychosocial support led to the avoidance of 3,071 alcohol-attributable diseases/injuries and 851 deaths per 100,000 patients. Nalmefene plus psychosocial support reduced the proportion of high-risk and very high-risk drinkers (23% versus 37% with psychosocial support alone) and increased the number of controlled drinkers (61% versus 45%). In the base-case, the nalmefene plus psychosocial support arm cumulated a 5-year incremental cost of €160 and an incremental QALY of 0.024. The incremental cost-effectiveness ratio of €1,928 was considerably low with respect to the decision threshold of €16,000 per QALY gained (equal to the GDP per capita of Greece). **CONCLUSIONS:** Treatment with nalmefene is cost-effective in the Greek health care setting leading to significant reductions of alcohol dependent patients and alcohol-attributable harmful events.

PMH28

THE EFFECT OF ATTENTION-DEFICIT/HYPERACTIVITY DISORDER ON FUNCTIONING AND RESOURCE UTILIZATION BY PSYCHIATRIC OUTPATIENTS IN EUROPE

Televantou F[1], Sobanski E[2], Kan CC[3], Lebrec J[4], Kraemer S[5], Dieteren NAHM[6], Deberdt W[7]

[1]*Eli Lilly UK, Windlesham, Surrey, UK,* [2]*Central Institute for Mental Health, Mannheim, Germany,* [3]*Radboud University Nijmegen Medical Centre, Nijmegen, The Netherlands,* [4]*Eli Lilly and Company, Bad Homburg, Germany,* [5]*Eli Lilly and Company Ltd, Bad Homburg, Germany,* [6]*Lilly Nederland BV, Houten, The Netherlands,* [7]*S.A. Eli Lilly Benelux N.V., Brussels, Belgium*

OBJECTIVES: Attention-deficit/hyperactivity disorder (ADHD) can have a significant negative impact on health outcomes in adults. This study was designed, in part, to determine the functional outcomes and health care utilization of adult psychiatric outpatients with ADHD in several European countries. **METHODS:** This was a multinational observational study. All eligible outpatients (excluding patients with any psychotic disorder) from a variety of outpatient settings were invited to participate. ADHD diagnosis was established with the Diagnostic Interview for ADHD in Adults (DIVA) based on the Diagnostic and Statistical Manual of Mental Disorders, 5thEdition. All patients were further evaluated with the Sheehan Disability Scale (SDS) and the EuroQol-5 Dimensions (EQ-5D) questionnaire, which was also used to assess anxiety/depression. **RESULTS:** Of 5662 patients approached, 2284 (40.3%) enrolled, of whom 1986 patients (87.0%) completed the study. Patients were 17 to 72 (median=42) years of age, and the majority were women (58.8%). Based on the DIVA, 17.4% (95% CI 15.7%-19.0%) of patients were diagnosed with ADHD. Patients with ADHD had moderate to severe overall impairment (mean SDS total score 18.9 [SD=6.6, n=348] versus 11.6 [SD=8.6, n=1659] in patients without ADHD). On the EQ-5D, a majority of patients with ADHD indicated having problems performing their usual activities (66.2% versus 41.2%) and many reported being "extremely anxious or depressed" (24.6% versus 16.0%). However, compared to patients without ADHD (n=1660), patients with ADHD (n=349) were less often prescribed antidepressants (57% versus 71.9%). The proportions of patients who visited a primary care physician, psychiatrist, or psychotherapist during the previous 6 months were similar between the 2 groups. **CONCLUSIONS:** Adult psychiatric outpatients with ADHD in our sample reported more overall functional impairment and psychiatric comorbidities compared to outpatients without ADHD. The use of medical resources was similar between the 2 groups.

PMH29

PALIPERIDONE VERSUS ATYPICAL LONG-ACTING ANTIPSYCHOTICS FOR RELAPSED CHRONIC SCHIZOPHRENIA: AN ECONOMIC ANALYSIS

Einarson TR[1], Letchumanan M[2], Pudas H[3], Van Impe K[4]

[1]*University of Toronto, Toronto, ON, Canada,* [2]*PIVINA Consulting Inc., Mississauga, ON, Canada,* [3]*Janssen, Espoo, Finland,* [4]*Janssen-Cilag GmbH, Neuss, Germany*

OBJECTIVES: To determine the cost-effectiveness of atypical long-acting injectable (LAI) antipsychotics in treating relapsed chronic schizophrenia from the viewpoint of the Finnish National Health Service. **METHODS:** A 1-year decision tree was adapted for use with patients in relapse, guided by an expert panel. Drugs included available atypical long-acting antipsychotics: paliperidone (PP-LAI), risperidone (RIS-LAI), olanzapine (OLZ-LAI) and aripiprazole (ARI-LAI). Rates of adherence, success, relapse and hospitalization were taken from the literature. Prices were obtained from standard lists and expressed in 2014 euros: drugs, psychiatrists/physicians, psychiatric nurse, inpatient and outpatient hospital care. Outcomes included expected cost/patient treated, QALYs, rates of re-hospitalization, emergency room (ER) visits and days in relapse. The primary analysis was the incremental cost per QALY. These preliminary results were tested with 1-way sensitivity analyses on important inputs. **RESULTS:** Over the 1-year time horizon, PP-LAI had the lowest total cost of 34,446€ per patient, RIS-LAI cost 37,338€, ARI-LAI cost 37,433€ and OLZ-LAI cost 41,384€. PP-LAI had the highest number of QALYs (0.686), followed by OLZ-LAI with 0.680, RIS-LAI with 0.674 and ARI-LAI with 0.671. PP-LAI also had the lowest rates of all negative outcomes. Re-hospitalization rates were 10.1%, 12.5%, 12.4% and 12.2% for PP-LAI, RIS-LAI, ARI-LAI and OLZ-LAI, respectively, Respective ER visits were 20.6%, 23.2%, 25.4% and 21.7%. Patients receiving PP-LAI experienced 224.0 relapse days, as opposed to 234.8 with RIS-LAI, 237.5 with ARI-LAI and 234.8 with OLZ-LAI. In 1-way sensitivity analyses, costs were robust (required changes >20%) against changes in drug price, primary rate of success, rates of relapse, dropouts and adherence. The driver of the model for all drugs was hospitalization, comprising from 70%-81% of the total cost; drug costs constituted 12%-22% and medical care 8%-15%. **CONCLUSIONS:** PP-LAI was shown to have the lowest cost and best clinical outcomes, and hence should be the atypical LAI of choice.

PMH30

THE COST EFFECTIVENESS OF GROUP ART THERAPY FOR PATIENTS WITH NON-PSYCHOTIC MENTAL HEALTH DISORDERS IN ENGLAND AND WALES

Stevenson M, Rawdin A, Uttley L, Sutton A

University of Sheffield, Sheffield, UK

OBJECTIVES: Art therapy provides an alternative to standard forms of psychological therapy. We estimated the cost-effectiveness of group art therapy for people with non-psychotic mental disorders. **METHODS:** A *de novo* area under the curve model was constructed with the following assumptions that: the maximum treatment effect would be associated with the time at which treatment ended; there would be a linear increase in treatment effect, from zero at baseline to the time at which treatment ended; there would be a residual effect of treatment with a linear decline in benefit until there was zero benefit at 52 weeks; given the short assumed duration of benefit, discounting was not necessary. Two RCTs identified in an accompanying clinical review provided data from which EQ-5D values could be estimated via mapping allowing comparisons to be made of group art therapy with wait-list control and with group verbal therapy. Scenario analyses altering the cost per patient and the assumed residual benefit were conducted. **RESULTS:** Art therapy compared with wait-list control had a mean cost per quality adjusted life year (QALY) below

£6000 for all scenarios and a 100% probability of being cost-effective at a willingness to pay of £20,000 per QALY. Verbal therapy appeared more cost-effective than art therapy with a cost per QALY below £1000 but there was considerable uncertainty in the decision and a sizeable probability (20%) that art therapy was dominant. In neither comparison was the art therapy intervention similar to that employed in England and Wales, furthermore in the wait list comparison patients were not explicitly diagnosed with non-psychotic mental disorders. As such, the generalisability of the results to practice in England and Wales is uncertain. **CONCLUSIONS:** Art therapy appears cost effective versus wait-list but of uncertain value compared with verbal therapy. Confirmatory studies are required to allow more definitive statements to be made.

PMH31

COST-EFFECTIVENESS OF LITHIUM VERSUS AN ATYPICAL ANTI-PSYCHOTIC (AAP) USED TO AUGMENT TREATMENT WITH A SELECTIVE SEROTONIN REUPTAKE INHIBITOR (SSRI) IN TREATMENT RESISTANT DEPRESSION (TRD)

Edwards SJ, Nherera L, Trevor N, Wakefield V
BMJ, London, UK

OBJECTIVES: To estimate the cost-effectiveness of augmentation of SSRI antidepressant therapy with either lithium or an AAP in TRD, defined as failure to respond to two or more antidepressants. **METHODS:** CENTRAL, EMBASE, MEDLINE, PsycINFO and NHS Economic Evaluation Database (NHS EED) were searched from inception to August 2011. Additional data were obtained from manufacturers. Systematic reviews of the economic and quality of life (QoL) literature were executed. Studies were assessed, independently by two reviewers, for quality against predefined criteria. A de novo probabilistic economic model was developed to synthesise the available data on costs and clinical effectiveness from UK NHS perspective; time horizon 1-year (8 weeks of acute treatment and 10 months of maintenance treatment). **RESULTS:** Four economic evaluations (none directly addressing the review question) and 17 QoL studies were identified and summarised in narrative reviews. Model results indicate that augmentation of an SSRI with lithium dominates augmentation with AAP (i.e. Results in cost savings of £905 per person per year and generates more health benefits, estimated to be 0.03 quality-adjusted life-years). However, sensitivity analyses showed that the model was highly sensitive to changes in acute treatment efficacy (response and remission) or discontinuation. The model was not sensitive to changes in other parameters. **CONCLUSIONS:** Cost-effectiveness analyses suggest that augmentation with lithium is less expensive and more effective than augmentation with AAP. However, the uncertainty in the clinical estimates of discontinuation and treatment response is reflected in the model results. An RCT comparing the two augmentation strategies, reporting relevant outcomes, including QoL, is needed.

PMH32

COMPUTERISED COGNITIVE BEHAVIOUR THERAPY FOR DEPRESSION MANAGEMENT: A COST-EFFECTIVENESS ANALYSIS

Duarte A[1], Walker S[2], Littlewood L[1], Gilbody S[1], Palmer S[1]
[1]*University of York, York, UK,* [2]*University of York, Heslington, York, UK*

OBJECTIVES: Computerised cognitive behaviour therapy (cCBT) forms a core component of stepped psychological care within primary care in the UK and other countries. However, the existing clinical effectiveness evidence for cCBT comes from developer-led trials and independent research is needed which evaluates the clinical and cost-effectiveness of cCBT. **METHODS:** A cost-effectiveness analysis was undertaken comparing two cCBT software packages, free-to-use MoodGYM and a commercial pay-to-use Beating the Blues (BtB), in addition to usual general practitioner care (UGPC), with UGPC alone, for the treatment of depressed adults. The analysis was based on data collected on the Randomised Evaluation of the Effectiveness and Acceptability of Computerised Therapy (REEACT). REEACT was a large (n=691), pragmatic multicentre study, independently conducted in a primary care setting. Outcomes were assessed using EQ-5D and used to estimate quality-adjusted life-years (QALYs). Resource use and costs were estimated from a NHS and Personal Social Services perspective. Scenario analyses were performed to determine the impact on cost-effectiveness of alternative assumptions, and uncertainty was characterised using cost-effectiveness acceptability curves. **RESULTS:** BtB was both more expensive and generated lower QALYs than UGPC alone (dominated) and MoodGYM yielded lower QALYs but at lower cost, resulting in an ICER of £6,933 per additional QALY for UGPC alone versus MoodGYM. UGPC alone was the most cost-effective intervention in the majority of scenario analyses, and the intervention most likely to be cost-effective at a £20,000 per QALY threshold (probabilities ranging across scenarios from 0.545 to 0.619). **CONCLUSIONS:** Our findings indicate that commercially-produced products were no more effective than free-to-use cCBT programmes. Importantly, neither BtB or MoodGYM appeared cost-effective compared to UGPC alone. Practice recommendations such as those offered by NICE and other countries supporting the use of cCBT within stepped models of care for depression will need to be reconsidered in light of these results.

PMH33

COST-UTILITY ANALYSIS OF LONG-ACTING PALIPERIDONE IN COMPARISON WITH ORAL RISPERIDONE, ORAL PALIPERIDONE AND LONG-ACTING RISPERIDONE IN THE MAINTENANCE TREATMENT OF SCHIZOPHRENIA IN THE CZECH REPUBLIC

Kolek M[1], Duba J[1], Vesela S[2], Pasztor B[1], Doleckova J[1]
[1]*OAKS Consulting s.r.o., Prague 9, Czech Republic,* [2]*Janssen-Cilag s.r.o., Prague 5, Czech Republic*

OBJECTIVES: The number of patients with schizofrenia in the Czech Republic amounts annually to approximately 126,000. Schizophrenia causes significant increases in mortality, shortening life expectancy by 25 years compared to the general population which implies high disease burden. The aim was to estimate the cost-effectiveness of long-acting paliperidone in the treatment with schizofrenia compared to oral risperidone, oral paliperidone and long-acting risperidone. **METHODS:** Cost-utility analysis was performed using a Markov model. The primary outcome was ICER/QALY. Oral risperidone, oral paliperidone and long-acting risperidone were selected as comparators. The basic components of the model include probabilities of relapse, individual hazard ratios for non-compliance by medication type and switch of treatment probabilities. Specific utilities for each health state were considered. Among relevant costs, reflecting payer's perspective, drug acquisition costs, monitoring costs, costs of relapses, follow-up care and adverse events were considered. **RESULTS:** Long-acting paliperidone reached ICER of EUR 16,233/QALY compared to oral risperidone, EUR 15,058/QALY to oral paliperidone and EUR 335/QALY to long-acting risperidone. The robustness of the model was supported by one-way deterministic analysis and probabilistic sensitivity analysis, which gave stable results. Long-acting paliperidone was cost effective in 97% of the simulations compared to oral risperidone. Long-acting paliperidone treatment gained incremental 0.903 QALYs on average compared to oral risperidone. **CONCLUSIONS:** The treatment of schizophrenia using long-acting paliperidone is associated with increased QALYs. It reduces incidence of adverse events, results in better prevention of relapses and can be considered a cost-effective treatment in the Czech Republic.

PMH34

COST-UTILITY OF VORTIOXETINE IN THE TREATMENT OF MAJOR DEPRESSIVE DISORDER: COMPARISON WITH AGOMELATINE, BUPROPION, SERTRALINE AND VENLAFAXINE IN THE FINNISH SETTING

Soini EJ[1], Hallinen T[1], Brignone M[2], Despiégel N[3], Aalto-Setälä M[4], Danchenko N[2], Kolasa K[4]
[1]*ESiOR Oy, Kuopio, Finland,* [2]*Lundbeck SAS, Issy-les-Moulineaux, France,* [3]*Optum, Nanterre, France,* [4]*Oy H. Lundbeck Ab, Turku, Finland*

OBJECTIVES: Switching to vortioxetine (a new antidepressant) after inadequate response to selective serotonin re-uptake inhibitor/serotonin–norepinephrine reuptake inhibitor (SSRI/SNRI) resulted in a significant and clinically relevant improvement versus agomelatine (REVIVE head-to-head clinical study) and also better efficacy over sertraline, venlafaxine and bupropion (indirect comparison). The aim of this study is to assess the Finnish cost-utility of vortioxetine versus these antidepressants in patients who switch due to inadequate response to previous treatments. **METHODS:** A one year cost-utility analysis was performed using a decision tree model for the second line and a Markov model for subsequent lines of MDD treatment. Undiscounted payer and societal perspectives were considered. Three health-states (depression, remission, recovery) and two treatment phases (2-month acute, 6-month maintenance) were defined. The relative efficacy of antidepressants was derived from the REVIVE trial and indirect comparisons at 2 months. Efficacy in subsequent treatment steps was derived from the STAR*D study. Adverse events and their consequences were included and derived from REVIVE, indirect comparisons, literature and expert opinion. Utilities were derived from REVIVE and the literature using Finnish preference weights. Finnish costs in 2013/2014 value were considered. Sensitivity analyses were conducted to assess the robustness of the findings. **RESULTS:** Vortioxetine was dominant from the payer's and societal perspective versus all comparators. It was projected to result to QALY gain of 0.013, 0.017, 0.025 and 0.028, and €223 (€1074), €128 (€957), €110 (€720) and €238 (€1390) direct (total) annual cost saving compared to agomelatine, bupropion, venlafaxine and sertraline respectively. These results were confirmed to be robust in several sensitivity analyses. **CONCLUSIONS:** Vortioxetine dominated agomelatine, bupropion, venlafaxine and sertraline in Finland and appears to be a relevant treatment option for MDD patients who need a therapy switch.

PMH35

COST-EFFECTIVENESS OF PALIPERIDONE PALMITATE VERSUS OTHER ANTIPSYCHOTICS FOR THE TREATMENT OF SCHIZOPHRENIA IN FRANCE

Doutriaux A[1], Cognet M[2], Druais S[2], Lançon C[3], Samalin L[4], Levy P[5], Godet A[6], Guillon P[7]
[1]*Amaris Consulting, London, UK,* [2]*Amaris, London, UK,* [3]*Hopital Sainte-Marguerite CHU, Marseille, France,* [4]*CHU Clermont-Ferrand, Clermont-Ferrand, France,* [5]*University of Dauphine - Paris, Paris, France,* [6]*Janssen Cilag, Issy-les-Moulineaux, France,* [7]*Janssen, Issy-les-Moulineaux, France*

OBJECTIVES: To estimate the cost-effectiveness of paliperidone palmitate (PLAI), a once-monthly long-acting injectable (LAI) atypical antipsychotic, compared to the most common antipsychotic strategies in France. **METHODS:** A Markov model was developed to simulate the progression of a cohort of schizophrenic patients through four health states (stable treated, stable non-treated, relapse and death) and up to three lines of treatment. PLAI was compared to risperidone LAI (RLAI), aripiprazole LAI (ALAI), olanzapine LAI (OLAI), haloperidol decanoate (HLAI) and oral olanzapine (OO). Costs, quality-adjusted-life-years (QALYS) and number of relapses were assessed over five years based on three-month cycles, and discounted at 4%, from a health insurance perspective. Patients were supposed to be stabilised after a clinical decompensation and entered the model into an initiation phase, followed by a relapse prevention phase in case of success. In the prevention phase, relapse rates were derived from hospitalisation risks based on French real-life data in order to capture the adherence effects. Safety and utility data were derived from international publications. Costs came from French health insurance databases and publications. Robustness of results was assessed through deterministic and probabilistic sensitivity analyses. **RESULTS:** PLAI was the less costly LAI and associated with an incremental cost-effectiveness ratio (ICER) of €1,988/QALY gained and €2,267/relapse avoided versus OO. RLAI and PLAI were associated with the highest number of QALYs (ICER of €2,421,386/QALY gained between PLAI and RLAI). PLAI dominated all other LAIs in terms of relapse but OLAI. Nevertheless, PLAI was highly cost-effective versus OLAI (ICER of €1,575,217/relapse avoided). **CONCLUSIONS:** This analysis is the first to assess the cost-effectiveness of antipsychotics based on French observational data. PLAI was found to be the least expensive LAI antipsychotic from French payer perspective. Oral therapies were less expensive but associated with lower levels of QALYs and more relapses compared to all atypical LAIs.